

WE CLAIM:

1. A process for laser welding together a laser beam transparent polyester article and a laser beam opaque polyester article comprising the steps of positioning the articles in contact with each other so as to define a junction there between; transmitting a laser beam energy not greater than 100 W focused on the area of contact at a scanning speed not greater than 1000 cm/min thus causing the junction to be melted without decomposition and joining together the polyester articles.
2. A process in accordance with Claim 1 wherein the laser beam energy is not greater than 100 W and focused on the area of contact at a scanning speed not greater than 300 cm/min.
3. A process in accordance with Claim 1 wherein the laser beam energy is not larger than 70 W and focused on the area of contact at a scanning speed not larger than 300 cm/min.
4. A process in accordance with Claim 1 wherein said laser beam transparent polyester article and said laser beam opaque polyester article are made from polyester compositions selected from the group consisting of polyethylene terephthalate and polybutylene terephthalate and the polyesters of the of the laser beam transparent article and the laser beam opaque article are different.
5. A process in accordance with Claim 1 wherein said laser beam transparent polyester article and said laser beam opaque polyester article are both made from polyester compositions selected from the group consisting of polyethylene terephthalate and polybutylene terephthalate and the polyesters of the laser beam transparent article and the laser beam opaque article are different.
6. A process in accordance with Claim 4 wherein said laser beam opaque polyester article includes 0.15 wt% carbon black based on a total weight of the polyester composition in the article.
7. A process in accordance with Claim 4 wherein said laser beam opaque polyester article includes 1.0 wt% nigrosine dye based on a total weight of the polyester composition in the article.

8. A process according to Claim 4, wherein a mixture of carbon black and nigrosine is contained in polyester composition of said laser beam opaque polyester article.

9. A laser welded article of manufacture made from the laser welding process of Claim 1.

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